MC Question #: 1

Which of the following skin barrier defects have been identified in atopic dogs as well as atopic humans?

A. Alteration in expression of filaggrin

B. Point mutation of SPINK-5

C. Increased expression of cathepsin S

D. Decreased expression of Kallikrein-7

MC Question #: 2

Which of the following defects associated with canine atopic dermatitis accounts for the physical distribution of lesions on the dog?

A. Binding of IL-31 to cutaneous neurons

B. Loss of T regulatory cell activity

C. Dysfunction of the skin barrier

D. Increased production of IL-17

MC Question #: 3

Which of the following cytokines is upregulated by the application of imiquimod to the skin?

A. Interferon gamma

B. Interleukin 4

C. Interleukin 10

D. Interleukin 9

MC Question #: 4

Which of the following clinical signs is considered pathognomonic for a diagnosis of Chiari-like malformation and syringomyelia in a Cavalier King Charles spaniel?

A. Tetraparesis

B. Neck pain

C. Loss of hearing

D. Scratching at the anterior part of the body without contacting the skin.

MC Question #: 5

Severe keratinous proliferations on the surfaces of all footpads developing in an otherwise healthy two-month old Dogues de Bordeaux is most likely _____.

A. Familial paw pad hyperkeratosis

B. Syndrome II zinc-responsive dermatosis

C. Exfoliative cutaneous lupus erythematosus

D. Canine distemper

MC Question #: 6

A 9 yr female intact English Cocker spaniel is presented with the complaints of obesity, lethargy, and recurrent staphylococcal pyoderma. She comes from a kennel with a high prevalence of immune-mediated diseases, including immune mediated anemias and thrombocytopenias, as well as polyarthropathies. Her PCV is 30 and RBC morphology is normal. Chemistries are normal except for elevated cholesterol. Which of the following is the most likely diagnosis for this dog?

A. Lymphocytic thyroiditis

B. Immune mediated hemolytic anemia

C. Immune mediated thrombocytopenia

D. Canine ehrlichiosis

MC Question #: 7

Recently a study showed an inverse correlation between the levels of endotoxin in the coat of Labrador retrievers and their severity of atopic disease. What is the immunologic mechanism by which endotoxin would suppress atopic disease?

A. Endotoxins bind to toll receptors which upregulate T helper 1 responses and repress T helper 2 responses.

B. Endotoxins stimulate epithelial cells to make ceramides thus improving skin barrier function.

C. Endotoxins block the binding of allergens to allergen-specific IgE, inhibiting mast cell degranulation.

D. Endotoxins stimulate the production of T regulatory cells which produce TGFbeta.

MC Question #: 8

Which of the following sampling approaches would maximize your chances of rapidly identifying potential genes involved in canine atopic dermatitis?

A. Several individuals of one breed in a limited geographic area.

B. 10 different breeds from one geographic area.

C. 20 different breeds from multiple geographic areas.

D. All pruritic dogs from shelters in multiple geographic areas.

MC Question #: 9

Which oral antibiotic has the potential to result in keratoconjunctivitis sicca, relative hypothyroidism, and vomiting?

A. Trimethoprim sulfa

B. Marbofloxacin

C. Azithromycin

D. Chloramphenicol

MC Question #: 10

You are presented with a 1 year old intact male mixed breed dog with vesicles, bullae, and ulcers on the buccal mucosa, concave pinnae, axillae, inguinal skin, and scrotum. Ulcers of the pawpads are also noted. Histopathology of intact vesicles shows subepidermal clefting. An enzyme-linked immunosorbent assay (ELISA) demonstrates circulating IgG autoantibodies to the NC1 domain of collagen VII. What is this dog's diagnosis?

A. Mucous membrane pemphigoid

B. Epidermolysis bullosa acquisita

C. Bullous pemphigoid

D. Pemphigus vulgaris

AOK Histo Question

1. You have a 4 year old male castrated miniature schnauzer presenting for several macular to raised, well-demarcated, hyperpigmented, lesions involving the inguinal and medial thighs and the lateral thorax. You biopsy the pigmented raised lesions of this patient and your histopathology report describes scalloped epidermal hyperplasia, marked hyperpigmentation of the lower layers of the epidermis, moderate diffuse hypergranulosis with keratohyalin granules, rare pyknotic nuclei with cytoplasmic clearing, and presence of dermal melanophages.

Based on this information, what is your diagnosis?

A. Melanocytoma

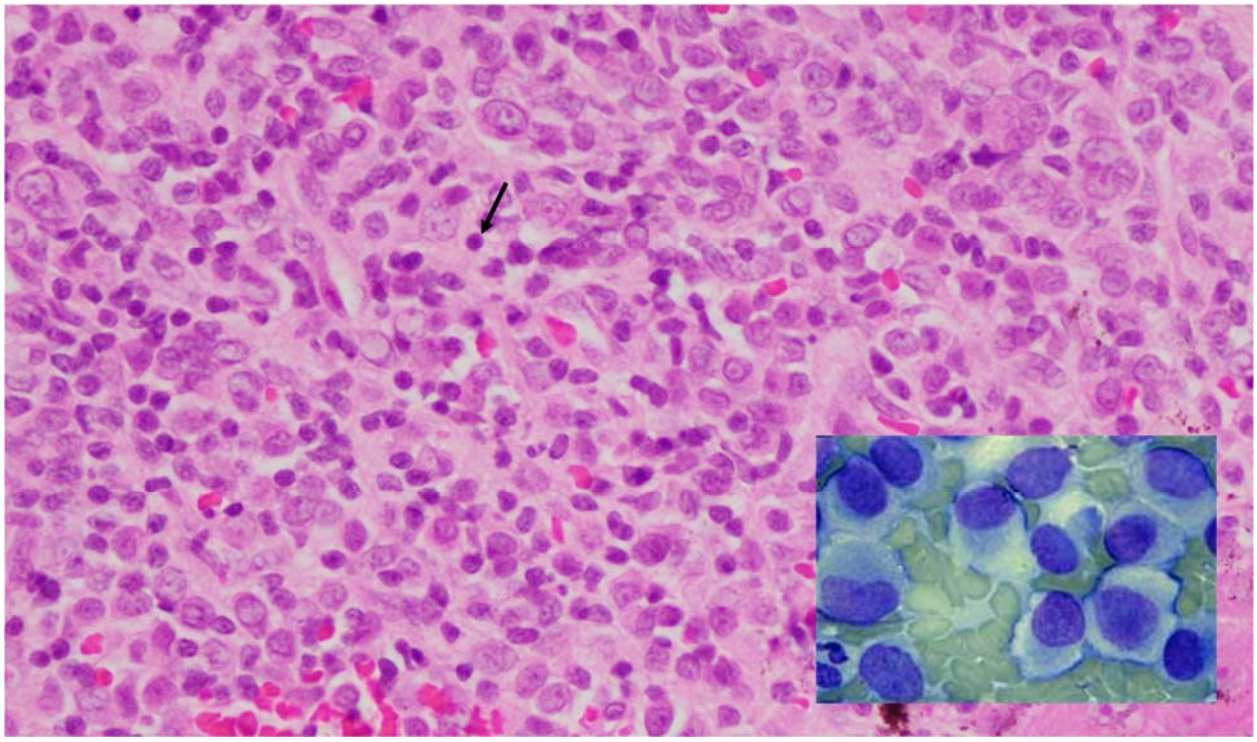
B. Pigmented viral plaques

C. Seborrheic keratoses

D. Lentigines

AOK Histo Question

2. A 2 year old male neutered boxer presents for a small, raised, erythematous cutaneous mass that the owner reports developed within the past month. You perform a fine needle aspirate (inset lower right box) along with a punch biopsy of part of the lesion for histopathology. About 7-10 days later, you call the owner to discuss the histopathology report and the owner notifies you that the lesion has started to crust over and seems much smaller. Knowing the histopathology results, you know that the cell denoted by the black arrow is responsible for the changes the owner is reporting. What type of cell is this?



A. Natural Killer T cell

B. CD8+ T cell

C. CD4+ T cell

D. Regulatory T cell

Digital Question

1. A non-pruritic 3 year old female spayed cat presents for bleeding from the paw pads on the right front foot as well as reluctance to walk. The cat is otherwise healthy with no other abnormal findings on examination or recent changes in medications or environment. On examination, you notice the following lesion, which is present on all four feet. What is your most likely differential?

A. Irritant contact dermatitis

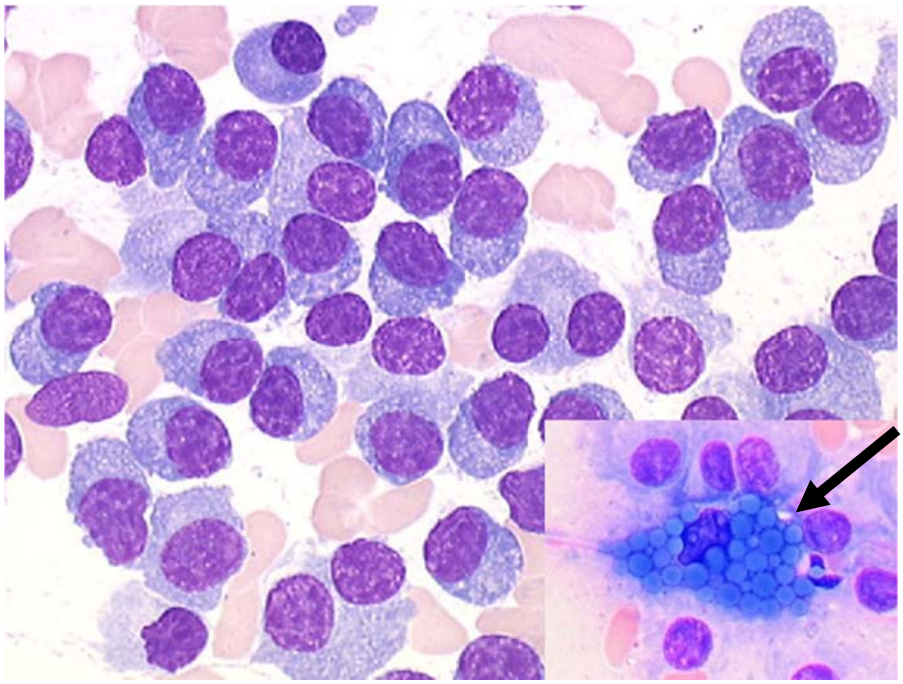
B. Cell poor vasculitis

C. Pemphigus foliaceus

D. Plasma cell pododermatitis

Digital Question

2. A 2 year old male neutered domestic short hair presented with swollen and ulcerated pawpads. A fine needle aspirate of the paw pad reveals the following. There were several of the characteristic cells identified by the black arrow. What would be the therapy of choice paired with the appropriate mechanism of action in this cat?



A. Doxycycline – Inhibitor of leukocyte chemotaxis

B. Toceranib – Inhibitor of tyrosine kinase

C. Mycophenolate – Inhibitor of inosine monophosphate dehydrogenase

D. Azathioprine – Inhibitor of DNA and RNA synthesis